



UNITED STATES DEPARTMENT OF COMMERCE

Patent and Trademark Office

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/650,182	08/29/00	SLOCUM	D 24837/04206

MM91/1108

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EXAMINER

SMITH, Z

ART UNIT

PAPER NUMBER

2877

DATE MAILED:

11/08/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No.	Applicant(s)
	09/650,182	SLOCUM ET AL.
	Examiner	Art Unit
	Zandra V. Smith	2877

-- Th MAILING DATE of this communication app ers on th cover sh t with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) 8-11 is/are allowed.
- 6) Claim(s) 1,2,12 and 14 is/are rejected.
- 7) Claim(s) 3-7 and 13 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 - a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) Interview Summary (PTO-413) Paper No(s) _____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____

DETAILED ACTION

Preliminary Amendment

The preliminary amendment(s) of January 17, 2001 and March 19, 2001 have been entered. An office action in response follows.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 12 is rejected under 35 U.S.C. 102(b) as being anticipated by *Goetz et al.*

(4,134,683).

As to **claim 12**, Goetz discloses a multispectral imaging and analysis system, comprising:
filtering light from a plurality of filters (col. 3, lines 28-33);
detecting the filtered light and generating plurality of light signals (col. 3, lines 41-47);
reading the plurality of light signals in parallel (col. 3, lines 49-51); and
generating output signals based on the plurality of light signals read to represent the color of the object (col. 3, lines 65-68).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Katayama* (6,226,034) in view of *Leeds et al.* (5,760,607).

As to **claim 1**, Katayama discloses a system for spatial non-uniformity correction of a color sensor, comprising:

a housing (item 12, col. 2, line 28);

the CCD (col. 2, line 28) reads on the plurality of photo detectors since it is comprised of a plurality of photo sites (see abstract); and

a field programmable gate array.

Katayama differs from the claimed invention in that the field programmable gate array is not specifically disclosed as reading the signals out in parallel, however the use of a field programmable gate array to read signals out in parallel is well known as taught by Leeds. Leeds discloses a system comprising a field programmable gate array and intelligent memory which includes a field programmable gate array used to read signals out in parallel (col. 9, lines 26-28). It would have been obvious to one having ordinary skill in the art at the time of invention to use the field programmable gate array to read the signals out in parallel since this would increase processing speed.

As to **claim 2**, the system of Katayama and Leeds discloses everything claimed, as applied above, in addition a plurality of signal output channels connected to one of the plurality of photo detectors for communicating data is provided where one color component is captured per pixels and in the processing (col. 2, lines 63-65 and col. 5, lines 54-65). Additionally, the field programmable gate array receives data from the output channel (col. 5, lines 54-65) and

Leeds provides the obviousness of reading the signals out in parallel (please see claim 1 for obvious rationale).

Allowable Subject Matter

Claims 8-11 are allowable over the prior art of record.

Claims 3-7 and 13-14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: prior art of record fails to provide or fairly suggest, a color measuring device which includes, in combination, a field programmable gate array a plurality of optical filter pairs having a responsivity which extends over different overlapping wavelength regions at the longer wavelength end of the spectrum. In addition, the prior art of record fails to provide or fairly suggest, a colorimeter that includes a field programmable gate array a plurality of optical filter pairs having a responsivity that extends over different overlapping wavelength regions at the longer wavelength end of the spectrum. Additionally, the prior art of record fails to provide or fairly suggest, accumulating the plurality of signals over a selected time period and filters having a transmission response being non-uniformly distributed across a visible spectrum and each overlapping at longer wavelengths of the visible spectrum.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686

F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970), and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 12 and 14 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 41 of U.S. Patent No. 6,163,377 in view of Goetz et al. (4,134,683).

As to **claims 12 and 14**, Boles (6,163,377) discloses filtering the light with a plurality of filters, each filter having a light transmission response being non-uniformly distributed across a visible spectrum and each overlapping at longer wavelengths of the visible spectrum; detecting the filtered light; and generating output signals based on the filtered light.

Boles (6,163,377) differs from the claimed invention in that reading the signals is parallel is not provided, however to do so is well known as taught by Goetz. Goetz discloses a multispectral imaging and analysis system that includes reading signals from a plurality of filters in parallel (col. 3, lines 49-51). It would have been obvious to one having ordinary skill in the art at the time of invention to read the signals in parallel since doing so would increase processing speed.

Fax/Telephone Numbers

If the applicant wishes to send a Fax dealing with either a proposed amendment or for discussion for a phone interview, then the Fax should:

_____ 1) Contain either a statement "DRAFT" or "PROPOSED AMENDMENT" on the Fax cover sheet; and

2) Should be unsigned by the attorney or agent.

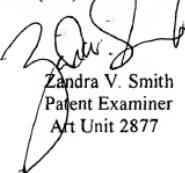
This will ensure that it will not be entered into the case and will be forwarded to the examiner as quickly as possible.

Papers related to the application may be submitted to Group 2800 by Fax transmission. Papers should be faxed to Group 2800 via the PTO Fax machine located in Crystal Plaza 4. The form of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The CP4 Fax Machine number is:

(703) 308-7722

Any inquiry concerning this communication or earlier communications from the examiner should be directed to *Examiner Zandra V. Smith* whose telephone number is (703) 305-7776, and who is available Monday - Friday 6:30 a.m. - 4:00 p.m..

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0956.


Zandra V. Smith
Patent Examiner
Art Unit 2877